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EXAMINER	
FISCHER, JUSTIN R	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/567,380	TANNO, ATSUSHI	
	Examiner	Art Unit	
	Justin R. Fischer	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) *3,10,18,21 and 22* is/are withdrawn from consideration.

5)☒ Claim(s) *6,7,13 and 14* is/are allowed.

6)☒ Claim(s) *1,2,4,5,8,9,11,12,15,16,19 and 20* is/are rejected.

7)☒ Claim(s) *17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 18, 21, and 22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the claims as currently presented include embodiments in which the shell structure has the capability of being used in conjunction with a pair of elastic rings (as set forth in the original disclosure- see figures) and in the absence of said elastic rings- the previously drafted claims only contained embodiments in which the shell structure had the capability of being used in conjunction with said elastic rings and newly submitted claims 18, 21, and 22 are directed to a species that is not used in conjunction with a pair of elastic rings.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18, 21, and 22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5, 8, 12, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zinnen (US 4,676,288, of record). Zinnen is directed to a tire wheel assembly comprising a noise reducing device or emergency support member 4 having a shell structure. The reference further teaches the inclusion of corrugations on the surface of said member (define a rough surface). In this instance, the corrugations can be wavelike (as best depicted in Figure 1 and described in Column 2, Lines 25-32), which is seen to define "non-linear" irregularities. Additionally, Zinnen suggests that the corrugations have a depth or height H_M that is approximately equal to one-fourth of the width W between adjacent corrugations (Column 3, Lines 45-55). In this instance, though, the reference fails to expressly disclose the depth/height as falling between 0.1 and 5.0 millimeters, more preferably between 0.1 and 3.0 millimeters. However, one of ordinary skill in the art at the time of the invention would have found such an arrangement obvious in view of the general disclosure of Zinnen. In particular, Zinnen suggests that the width W between adjacent corrugations can be narrow and/or wide (Column 3, Lines 58-62). In the event that they are narrow, the depth of the corrugations would be extremely small since it is described as being approximately one-fourth of the width W- such an embodiment would have been expected to satisfy the broad range of the claimed invention, there being no conclusive showing of unexpected results to establish a criticality for the claimed invention.

Lastly, with respect to the independent claims, one of ordinary skill in the art at the time of the invention would have found it obvious to position said member at a height between 10 and 70 percent of the tire section height- such an arrangement is

consistent with the figures of the reference and conventional positioning of similar support members. Additionally, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement.

Regarding claims 5 and 12, the corrugations of Zinnen are present over the entire axial extent of the radial outer surface, which is seen to constitute at least 20% of the entire surface area of the support member.

As to claim 15 and 19, the shell structure of Zinnen has an "arch-like" cross-sectional shape.

4. Claims 1, 2, 4, 5, 8, 9, 11, 12, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glinz (US 2002/0195183, of record) and further in view of Zinnen. Glinz is directed to a tire wheel assembly incorporating a shell structure (emergency support structure) that is supported on a rim by a pair of elastic rings. While the reference fails to describe the inclusion of a roughened surface, one of ordinary skill in the art at the time of the invention would have found it obvious to incorporate such an arrangement in view of Zinnen. In particular, Zinnen teaches the inclusion of corrugations (non linear) in an emergency support member in order to provide improved steering stability (Column 1, Lines 55-65).

As to the height of the corrugations, Zinnen suggests that the corrugations have a depth or height H_M that is approximately equal to one-fourth of the width W between adjacent corrugations (Column 3, Lines 45-55). In this instance, though, the reference fails to expressly disclose the depth/height as falling between 0.1 and 5.0 millimeters, more preferably between 0.1 and 3.0 millimeters. However, one of ordinary skill in the

art at the time of the invention would have found such an arrangement obvious in view of the general disclosure of Zinnen. In particular, Zinnen suggests that the width W between adjacent corrugations can be narrow and/or wide (Column 3, Lines 58-62). In the event that they are narrow, the depth of the corrugations would be extremely small since it is described as being approximately one-fourth of the width W- such an embodiment would have been expected to satisfy the broad range of the claimed invention, there being no conclusive showing of unexpected results to establish a criticality for the claimed invention.

Lastly, with respect to the independent claims, one of ordinary skill in the art at the time of the invention would have found it obvious to position said member at a height between 10 and 70 percent of the tire section height- such an arrangement is consistent with the figures of the reference and conventional positioning of similar support members. Additionally, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement.

Regarding claims 4 and 11, the claims define the thickness in terms of absolute values (0.4 to 1.0 mm). It is well recognized that tire dimensions are highly dependent on the tire size, and ultimately, on the specific tire being manufactured (smaller tires generally include smaller components). One of ordinary skill in the art at the time of the invention would have been able to appropriately select the desired thickness as a function of the specific tire being manufactured and the necessary emergency reinforcement. Furthermore, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed thickness values.

With respect to claims 5 and 12, the corrugations of Zinnen are present over the entire axial extent of the radial outer surface, which is seen to constitute at least 20% of the entire surface area of the support member.

As to claims 15 and 19, the shell structure of Glinz has an "arch-like" cross-sectional shape.

5. Claims 1, 5, 8, 12, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama (JP 64-18708, newly cited) and further in view of Zinnen. Hirayama is directed to a tire wheel assembly incorporating a shell structure or emergency support structure in the tire cavity. While the reference fails to describe the inclusion of a roughened surface, one of ordinary skill in the art at the time of the invention would have found it obvious to incorporate such an arrangement in view of Zinnen. In particular, Zinnen teaches the inclusion of corrugations (non linear) in an emergency support member in order to provide improved steering stability (Column 1, Lines 55-65).

As to the height of the corrugations, Zinnen suggests that the corrugations have a depth or height H_M that is approximately equal to one-fourth of the width W between adjacent corrugations (Column 3, Lines 45-55). In this instance, though, the reference fails to expressly disclose the depth/height as falling between 0.1 and 5.0 millimeters, more preferably between 0.1 and 3.0 millimeters. However, one of ordinary skill in the art at the time of the invention would have found such an arrangement obvious in view of the general disclosure of Zinnen. In particular, Zinnen suggests that the width W between adjacent corrugations can be narrow and/or wide (Column 3, Lines 58-62). In

the event that they are narrow, the depth of the corrugations would be extremely small since it is described as being approximately one-fourth of the width W- such an embodiment would have been expected to satisfy the broad range of the claimed invention, there being no conclusive showing of unexpected results to establish a criticality for the claimed invention.

Lastly, with respect to the independent claims, one of ordinary skill in the art at the time of the invention would have found it obvious to position said member at a height between 10 and 70 percent of the tire section height- such an arrangement is consistent with the figures of the reference and conventional positioning of similar support members. Additionally, applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed arrangement.

With respect to claims 5 and 12, the corrugations of Zinnen are present over the entire axial extent of the radial outer surface, which is seen to constitute at least 20% of the entire surface area of the support member.

Regarding claims 16 and 20, Figures 1 and 3 clearly depict a runflat shell structure having and I-shaped cross-sectional shape defined by an inner ring (bottom of I portion), an outer ring (top of I portion), and a connection plate (connecting piece of I portion).

Allowable Subject Matter

6. Claims 6, 7, 13, are 14 allowed.

7. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed January 22, 2008 have been fully considered but they are not persuasive.

Applicant contends that Zinnen fails to disclose or suggest a noise reducing device for a wheel rim, where the noise reducing device includes a shell structure with a rough surface having a ten-point height of non-linear irregularities. However, as set forth in the rejection above, the corrugations of Zinnen can be wavelike (Figure 1) or toothed shape (Figure 2). It is agreed that the tooth shaped arrangement defines a series of linear corrugations; however, it is unclear how the wavelike corrugations of Zinnen cannot be viewed as "nonlinear" irregularities. Furthermore, while the reference fails to disclose an arrangement for reducing noise, it is not required for the reference to identify applicant's benefits. In this instance, the structure of Zinnen satisfies the structural limitations set forth in the claims and as such, the structure of Zinnen can be viewed as a "noise reducing device". It is suggested that applicant structurally define the noise reducing device in a manner that defines over the assembly of Zinnen.

Applicant further argues that one of ordinary skill in the art at the time of the invention would not have found the claimed height (0.1-5 mm) obvious because the purpose of Zinnen differs from the purpose of the irregularities in the invention. In this instance, however, it is not required for the reference to identify applicant's reasoning or

rationale. In particular, Zinnen suggests that the height is equal to one-fourth of the width between adjacent corrugations and furthermore, that the width can be narrow or wide (Column 3, Lines 58-62). Thus, it is evident that Zinnen is directed to a wide variety of embodiments in which the height can vary as a function of the corrugation spacing. Absent any conclusive showing of unexpected results, one of ordinary skill it he art at the time of the invention would have found it obvious to form the height between 0.1 and 5 mm since the range is extremely broad and incorporates a wide number of embodiments in which the height is extremely small and slightly larger- such a range is consistent with the general disclosure of the reference. It is emphasized that the fact that Zinnen requires a mating arrangement between corrugations does not preclude the assembly of Zinnen from satisfying the disclosed heights.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791